DART AEROSPACE
Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200

Purchasing Receipts

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Serial No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
PO038513	ACI001-VC	1	1	Net 30	MT-HRS-P-0.500 Part in drawing	Hot Rolled Steel Plate 0.500"" (44W) receive sf				16	12/7/2017	16		S017914	Stock	12/6/2017	$ 13.91 / sf	0		$222.62	Acier Ouellette Inc.
		2			MT-HRS-P-0.375	Hot Rolled Steel Plate 0.375"" (44W) receive sf						32		S017915	Stock	12/6/2017	$ 11.37 / sf	0		$363.72	Acier Ouellette Inc.
		3			MT-HRS-P-0.188	Hot Rolled Steel Plate 0.188"" (44W) receive sf						16		S017916	Stock	12/6/2017	$ 5.53 / sf	0		$88.48	Acier Ouellette Inc.
		4			M101880.625X05.000 Part in drawing	1010-1025 Steel Bar .625 X 5.000 : MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A569/A570 OR OR CSA G40-21 38W/44W/50W/60W/70W CSA G40-21 OR 38W/44W/50W/60W/70W receive ft				6		6		S017917	Stock	12/6/2017	$ 18.34 / ft	0		$110.06	Acier Ouellette Inc.
		5			MT-4140QT-R1.250	MT-4140 QT-R1.250				12		12		S017918	Stock	12/6/2017	$ 6.51 / ft	0		$78.07	Acier Ouellette Inc.
									Total:	66		82								$681.39	

Plex 12/6/2017 9:20 AM Dart.Plouffe.Sonia

ACIER OUELLETTE INC.
935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Order - Sales

Copy CO00064889

Customer N°	CLI0001056
Date	2017/11/30
Delivery date	**2017/12/05**
Your order N°	038513
Processed by	Josianne Bourdon
Salesman	
Carrier	OUELLETTE VALLEYFIELD
Credit Terme	Net 30 Days
Page	1

Billed to
DART AEROSPACE LTD

1270 , ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Delivery Route 5

Product Description	Weight	Qty	U/M	PCS NB CMD	PCS NB EXP	PCS NB B/O	Internal Use Only IN	I	S	C	OUT
1 FLAT CR 5/8 X 5 1018 RANDOM FCR-585-V **2957**	63.75	6.00	PI_$CLB	1.00							
1 X 6' HEAT: KYS13683 ok TRANSIT ST-JEROME LE 04/12 COUPE A LA SCIE											
SCIE **1**		1.00	UN	0.00							
3 ROUND 4140 HEAT TREAT 1 1/4 RANDOM R4140-114H-V **4897**	50.06	12.00	PI_$CLB	1.00							
1 X 12' HEAT: 45610914 ok COUPE A LA SCIE											
SCIE **1**		1.00	UN								
4 PLATE 44W 3/16 RANDOM P44-316-V **4105**	122.40	16.00	PI2_$CLB	1.00							
1 X 4' X 4' HEAT: 442C4											

NIR : R-109516-6

Next Page...

DELIVERY - CLIENT

CO00064891

ACIER OUELLETTE INC.
935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Customer N°	CLI0001056
Date	2017/11/30
Delivery date	~~2017/12/04~~
Your order N°	038513
Processed by	Josianne Bourdon
Salesman	
Carrier	OUELLETTE VALLEYFIELD
Credit Terme	Net 30 Days
Page	1

Billed to
DART AEROSPACE LTD

1270 , ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to
, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Instruction F-M

Delivery Route 5

Product Description	Weight	Qty	U/M	PCS NB CMD	PCS NB EXP	PCS NB B/O	Internal Use Only IN	I	S	C	OUT
1 PLATE 44W 1/2 RANDOM P44-12-V **4062**	326.40	16.00	PI2_$CLB		1x 4'x4'						
1 X 4'X 4' HEAT COUPE AU FEU FEU **3**		1.00	UN								
2 PLATE 44W 3/8 RANDOM P44-38-V **4116**	244.80	~~16.00~~ 32 . SF	PI2_$CLB		1x 4x8						
1 X 4' X 8' HEAT COUPE AU FEU FEU **3**		1.00	UN								

SPM-126.

SPM-125

Total Weight (Lbs) : 571.20

NIR : R-109516-6

Conditions :
All sold and delivered materials remain the property of "Acier Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

Prepared By :	Verified By :	Delivered By :	Time	Y M D
	MJ			

Customer's Signature

Date

Total ($CAD)

DELIVERY - CLIENT

CO00064889

ACIER OUELLETTE INC.
935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Customer N°	CLI0001056
Date	2017/11/30
Delivery date	**2017/12/05**
Your order N°	038513
Processed by	Josianne Bourdon
Salesman	
Carrier	OUELLETTE VALLEYFIELD
Credit Terme	Net 30 Days
Page	1

Billed to
DART AEROSPACE LTD

1270 , ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to
, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Instruction F-M

Delivery Route 5

Product Description	Weight	Qty	U/M	PCS NB CMD	PCS NB EXP	PCS NB B/O	Internal Use Only IN	I	S	C	OUT
1 FLAT CR 5/8 X 5 1018 RANDOM FCR-585-V **2957** *1 X 6' HEAT*	63.75	6.00	PI_$CLB		1x 6'						
TRANSIT ST-JEROME LE 04/12											
COUPE A LA SCIE SCIE **1**		1.00	UN								
3 ROUND 4140 HEAT TREAT 1 1/4 RANDOM R4140-114H-V **4897** *1 X 12' HEAT*	50.06	12.00	PI_$CLB		1x 12'		8pm-12-6				

NIR : R-109516-6

Next Page...

DELIVERY - CLIENT

CO00064889

ACIER OUELLETTE INC.
935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Customer N°	CLI0001056
Date	2017/11/30
Delivery date	**2017/12/05**
Your order N°	038513
Processed by	Josianne Bourdon
Salesman	
Carrier	OUELLETTE VALLEYFIELD
Credit Terme	Net 30 Days
Page	2

Billed to
DART AEROSPACE LTD

1270 , ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Instruction F-M

Delivery Route 5

Product Description	Weight	Qty	U/M	PCS NB CMD	PCS NB EXP	PCS NB B/O	Internal Use Only IN	I	S	C	OUT
COUPE A LA SCIE SCIE **1**		1.00	UN								
4 PLATE 44W 3/16 RANDOM P44-316-V **4105**	122.40	16.00	PI2_$CLB		1x 4'x4'						
1 X 4' X 4' HEAT SHEAR CUT SHEAR **2**		1.00	UN								

Conditions :
All sold and delivered materials remain the property of "Acier Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

Total Weight (Lbs) : 236.21

NIR : R-109516-6

Prepared By :	Verified By :	Delivered By	Time
	AM/RP		

Customer's Signature

Y M D
17/12/05
Date

Total ($CAD)

ACIER OUELLETTE INC.
935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Quotation

SOU0072770

Billed to

DART AEROSPACE LTD

1270 , ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Customer N°	CLI0001056
Date	2017/11/22
Revision N°	0
Prices valid until	**2017/11/29**
Your Order N°	
Processed by	BERNARD
Salesman	JOSIANNE
Carrier	OUELLE SDV
Credit Terms	Net 30 Days
Page	1

Product N° and description	Weight	Qty	U/M	Qty	U/M	Price	Pcs Nb	Price	Amount
PLATE 44W 1/2 RANDOM P44-12-V **4062** *1 X 4'X 4' P & O NOT AVAILABLE IN 1/2"* COUPE AU FEU FEU **3** *STOCK*	326.40	16.00 1.00	PI2_$CLB UN	16.00 1.00	PI2		1.00	222.620	222.62
PLATE 44W 3/8 RANDOM P44-38-V **4116** *1 X 4' X 8' P & O NOT AVAILABLE IN 3/8"* COUPE AU FEU FEU **3** *STOCK*	244.80	16.00 1.00	PI2_$CLB UN	16.00 1.00	PI2		1.00	181.860	181.86
PLATE 3/16 P & O **N** .187" 4x8 *1 X 4' X 8' 4-5 DAYS*	0.00	1.00	UN	1.00	UN		1.00	240.000	240.00
SURCHARGE ENERGETIQUE **FRAIS_ENERGETIQUE**			$						3.95

P.O: 38513

Total Weight (Lbs) 571.20

Important

This offer is based on availability and current pricing conditions that may be revised upon reception of the order.
Cette offre est sujette à la disponibilité et aux conditions de crédit approuvé.
Approuved and Accepted by : _____ Date : _____

Sub-total	648.43
TVH-13	84.30
Total ($CAD)	**732.73**

Prix en fonction de l'évolution des prix de l'acier sur le marché.

ACIER OUELLETTE INC.
935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Quotation

SOU0074081

Billed to

DART AEROSPACE LTD

1270 , ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Customer N°	CLI0001056
Date	2017/11/29
Revision N°	0
Prices valid until	**2017/12/06**
Your Order N°	
Processed by	BERNARD
Salesman	JOSIANNE
Carrier	OUELLE SDV
Credit Terms	Net 30 Days
Page	1

Product N° and description	Weight	Qty	U/M	Qty	U/M	Price	Pcs Nb	Price	Amount
FLAT CR 5/8 X 5 1018 RANDOM FCR-585-V **2957** *1 X 6' 2-3 DAYS*	63.75	6.00	PI_$CLB	6.00	PI		1.00	110.060	110.06
COUPE A LA SCIE SCIE **1**		1.00	UN	1.00					
PLAT 4140 1/2 X 4 HT **N** *1 X 6' OFFER HT 2-3 DAYS*	0.00	1.00	UN	1.00	UN		1.00	165.000	165.00
ROUND 4140 HEAT TREAT 1 1/4 RANDOM R4140-114H-V **4897** *1 X 12' STOCK OFFER HT*	50.06	12.00	PI_$CLB	12.00	PI		1.00	78.070	78.07
COUPE A LA SCIE SCIE **1**		1.00	UN	1.00					
~~ROND 4130 5/16~~ **N** *NON-DISPONIBLE*	0.00	1.00	UN	1.00	UN	0.00	1.00		0.00
OFFER									
ROUND 4140 ANNEALED 5/16 RANDOM R4140-516A-V **4971** *1 X 20' R/L 2-3 DAYS*	5.22	20.00	PI_$CLB	20.00	PI		1.00	12.370	12.37
PLATE 44W 3/16 RANDOM P44-316-V **4105** *1 X 4' X 4' STOCK*	122.40	16.00	PI2_$CLB	16.00	PI2		1.00	88.480	88.48
SHEAR CUT SHEAR **2**		1.00	UN	1.00					
SURCHARGE ENERGETIQUE **FRAIS_ENERGETIQUE**			$						3.95
Total Weight (Lbs)	241.43								

Important

This offer is based on availability and current pricing conditions that may be revised upon reception of the order.
Cette offre est sujette et conditionnelle à l'approbation du crédit.
Approuved and Accepted by : _____ Date : _____

Sub-total	457.93
TVH-13	59.53
Total ($CAD)	**517.46**

Chantal Lavoie

From: Daniel Paquette
Sent: Wednesday, November 29, 2017 8:59 AM
To: Chantal Lavoie
Subject: FW: A36 PICKLED IN OIL Ref; RBW6505G00831-3G

Use DWG. MT-HRS-P. This is for "non" pickled in oil (normal steel) Scott will deviate the drawing until we can figure out what to do in the future. Thanks.
Ex; MT-HRS-P-0.500
Numbers are not in PLEX yet I will have them put in and let you know ASAP.

From: Daniel Paquette
Sent: Wednesday, November 22, 2017 11:42 AM
To: Chantal Lavoie <clavoie@dartaero.com>
Subject: A36 PICKLED IN OIL Ref; RBW6505G00831-3G

Can you order this material please. Thanks.

0.500 thick 4' X 4' SHEET
0.375 thick 4' X 4' SHEET
0.187 thick 4' X 4' SHEET

One of each please.

DANIEL PAQUETTE
Production Engineering Coordinator

DART AEROSPACE
T 1 613 632-5200 > 236
F 1 613 632-5246
1 800 556- 4166
www.dartaerospace.com

Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER
PO038513

Supplier: ACI001-VC
Acier Ouellette Inc.
935 Boul. Du Havre
Valleyfield
QC
J6S 5L1 Canada
Phone: 800 667 4248
Fax: 450 377 5696

PO No: PO038513
PO Date: 11/29/17
Due Date: 12/7/17
Purchase Order Revision:
Revision Date:
Ship-To Contact: Baker, DianePhone: dbaker@dartaero.com

E-MAILED NOV 30 2017

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments: quotation no, sou0072770,sou0074081

Items

Line Item	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	MT-HRS-P-0.500	Hot Rolled Steel Plate 0.500" (44W) receive sf	Firmed	12/7/17	16 sf	0 sf 16SF	16 sf	$13.91375/sf	$222.62
2	MT-HRS-P-0.375	Hot Rolled Steel Plate 0.375" (44W) receive sf	Firmed	12/7/17	16 sf	0 sf ~~16SF~~ 32SF	16 sf	$11.36625/sf	$181.86
3	MT-HRS-P-0.188	Hot Rolled Steel Plate 0.188" (44W) receive sf	Firmed	12/7/17	16 sf	0 sf 16SF	16 sf	$5.53/sf	$88.48
4	M1018B0.625X05.000	1010-1025 Steel Bar .625 X 5.000 : MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A569/A570 OR OR CSA G40-21 38W/44W/50W/60W/70W CSA G40-21 OR 38W/44W/50W/60W/70W receive ft	Firmed	12/7/17	6 ft	0 ft 6ft	6 ft	$18.34333/ft	$110.06
5	MT-4140QT-R1.250	MT-4140 QT-R1.250	Firmed	12/7/17	12 ft	0 ft 12ft	12 ft	$6.505833/ft	$78.07
								Grand Total:	**$681.09**

Order Notes

SP17-12-LCL

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

ACIER OUELLETTE INC.
935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Order - Sales

Copy CO00064891

Customer N°	CLI0001056
Date	2017/11/30
Delivery date	**2017/12/04**
Your order N°	038513
Processed by	Josianne Bourdon
Salesman	
Carrier	OUELLETTE VALLEYFIELD
Credit Terme	Net 30 Days
Page	1

Billed to
DART AEROSPACE LTD

1270 , ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Delivery Route 5

Product Description	Weight	Qty	U/M	PCS NB CMD	PCS NB EXP	PCS NB B/O	Internal Use Only IN	I	S	C	OUT
1 PLATE 44W 1/2 RANDOM											
P44-12-V **4062**	326.40	16.00	PI2_$CLB	1.00							
1 X 4'X 4' HEAT 711852											
COUPE AU FEU											
FEU **3**		1.00	UN								
2 PLATE 44W 3/8 RANDOM											
P44-38-V **4116**	244.80	16.00	PI2_$CLB	1.00							
1 X 4' X 8' HEAT 7093C4-51											
COUPE AU FEU											
FEU **3**		1.00	UN								
SURCHARGE ENERGETIQUE											
FRAIS_ENERGETIQUE			$	0.00							

Total Weight (LBS) : 571.20

NIR : R-109516-6

Conditions :
All sold and delivered materials remain the property of "Acier Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

Prepared By :	Verified By :	Delivered By :	Time	Customer's Signature	Y	M	D

Total ($CAD)	**461.53**
Deposit	**0.00**
Balance	**461.53**

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M101RB0.625X05.000
DATE: DEC 07 2017

PO / BATCH NO.: 038513/5017917

MATERIAL CERT REC'D: Yes
QUANTITY RECEIVED: 6"
QUANTITY INSPECTED: 6"
QUANTITY REJECTED: 0

THICKNESS ORDERED: .625
THICKNESS RECEIVED: .625
SHEET SIZE ORDERED: N/A
SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	Y	N	Dart tooling use only
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	Heat# KY513683
CORRECT MATERIAL IDENTFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY:	SIGNED OFF BY:
DATE: DEC 07 2017	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M1018A.750W.125
DATE: DEC 07 2017

PO / BATCH NO.: 038507/5018265

MATERIAL CERT REC'D: yes
QUANTITY RECEIVED: 20"
QUANTITY INSPECTED: 20"
QUANTITY REJECTED: 0

THICKNESS ORDERED: .750
THICKNESS RECEIVED: .750
SHEET SIZE ORDERED: N/A
SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	N	
CORRECT FINISH	Y	N	
CORROSION	Y	N	
CORRECT GRAIN DIRECTION	Y	N	
CORRECT MATERIAL PER M-DRAWING	Y	N	— Dark tooling use only
CORRECT THICKNESS	Y	N	
PHOTO REQUIRED	Y	N	
CORRECT REF # TO LINK CERT	Y	N	Heat # 52074320/04
CORRECT MATERIAL IDENTFICATION	Y	N	
CORRECT M# ON THE MATERIAL	Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY:	SIGNED OFF BY:
DATE: DEC 07 2017	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M1018 B0.500X01.000

PO / BATCH NO.: 038507/5018266

DATE: DEC 07 2017

MATERIAL CERT REC'D: Yes

QUANTITY RECEIVED: 12"

QUANTITY INSPECTED: 12"

QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.500

THICKNESS RECEIVED: 0.500

SHEET SIZE ORDERED: N/A

SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	Y	N	— Dert tooling use only
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	Heat # 588829
CORRECT MATERIAL IDENTFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY:	SIGNED OFF BY:
DATE: DEC 07 2017	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-4140T-R 1.250 PO / BATCH NO.: 038513/5017918

DATE: DEC 07 2017

MATERIAL CERT REC'D: Yes THICKNESS ORDERED: 1.250

QUANTITY RECEIVED: 12" THICKNESS RECEIVED: 1.250

QUANTITY INSPECTED: 12" SHEET SIZE ORDERED: N/A

QUANTITY REJECTED: 0 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	N	
CORRECT FINISH	Y	N	
CORROSION	Y	N	
CORRECT GRAIN DIRECTION	Y	N	
CORRECT MATERIAL PER M-DRAWING	Y	N	Astm 4140
CORRECT THICKNESS	Y	N	
PHOTO REQUIRED	Y	N	
CORRECT REF # TO LINK CERT	Y	N	Heat # 45610914
CORRECT MATERIAL IDENTFICATION	Y	N	
CORRECT M# ON THE MATERIAL	Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: pd / 8	SIGNED OFF BY:
DATE: DEC 07 2017 / 17/12/11	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

REV.	DESCRIPTION	DATE	BY	APPROVED
A	NEW ISSUE	17.09.12	VM	WM

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 4140 QUENCHED & TEMPERED STEEL ROUND BAR

SPECIFICATION: ASTM 4140 QT or ASTM 4142 QT

PART NUMBER: MT-4140QT-R [D.DDD]
WHERE "D.DDD" = DIAMETER IN INCHES

EG. 5/8" ROUND BAR = MT-4140QT-R0.625

DART AEROSPACE Hawkesbury, Ontario Canada

TITLE: AISI 4140 Q&T ROUND BAR

DWG NO: MT-4140QT-R REV: A

DESIGN BY:	VM 8/9/2017	.XXX ± .005	FRACTIONS ± 1/8
DRAWN BY	VM 09/14/2017	.XX ± .01	ANGLES ± 5°
CHECKED	VM 09/14/2017	.X ± .1	SURFACES = 125
MFG APPR.	DP 09/14/2017		
QA APPR.	PD 09/14/2017		
APPROVED:	WM 09/14/2017		
DATE. 9/14/2017	SCALE. NTS	WEIGHT 0.0 LBS	SHEET 1 OF 1

1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED
2. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
3. DIMENSIONAL LIMITS APPLY AFTER PLATING

ECN 17-655

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-HRS-P-0.188 PO / BATCH NO.: 038513/5017916

DATE: DEC 09 2017

MATERIAL CERT REC'D: Yes THICKNESS ORDERED: 0.188

QUANTITY RECEIVED: 16 pc THICKNESS RECEIVED: 0.188

QUANTITY INSPECTED: 16 pc SHEET SIZE ORDERED: 4X4

QUANTITY REJECTED: Ø SHEET SIZE RECEIVED: ~~4X48~~ 4X4

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	44 W
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	~~Heat#~~ 442C4
CORRECT MATERIAL IDENTFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: [signature]	SIGNED OFF BY:
DATE: DEC 09 2017 / 12/12/14	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

REV	DESCRIPTION	ECN #	DATE	BY	APPROVED
B	REMOVED LENGTH AND WIDTH DIMENSIONS	17-675	26/09/2017	SAC	WM

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL:	HOT ROLLED STEEL PLATE
SPECIFICATION:	ASTM A36 OR ASTM A1011 OR 44W OR ASTM A1018
PART NUMBER:	MT-HRS-P-[T.TTT]
	WHERE T.TTT IS PLATE THICKNESS IN INCHES
EXAMPLE:	MT-HRS-P-0.750
	TOLERANCES PER MANUFACTURER SPECIFICATIONS

DART AEROSPACE Hawkesbury, Ontario, Canada

TITLE: HOT ROLLED STEEL PLATE

DWG NO: MT-HRS-P — REV: B

DESIGN BY	SAC 9/8/2017	XXX ± .005	FRACTIONS ± 1/8
DRAWN BY	SAC 09/27/2017	XX ± .01	ANGLES ±.5°
CHECKED	VM 09/27/2017	X ± .1	SURFACES = 125
MFG. APPR	DP 09/27/2017	1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED	
APPROVED	WM 10/05/2017	2. INTERPRET DIM AND TOL PER ASME Y14.5M 2009	
DATE	9/27/2017	3. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE: NTS	WEIGHT N/A		SHEET 1 OF 1

NUCOR
NUCOR BRIGHT BAR ORRVILLE

Mill Certification
3/15/2016

MTR #: X1-100367
555 Collins Blvd
ORRVILLE, OH 44667
(330) 682-5355

Customer P.O.	B94089	Sales Order	102711.1
Product Group	Cold Finish Bar	Part Number	340201
Grade	1018 ASTM A108	Lot #	X1100035
Size	Flat 0.6250x5.0000 (0080)	Heat #	KYS13683
Product	FL 0.6250" x 5.0000" 1018 CD	B.L. Number	X1-100425
Description	CF Grade 1018	Load Number	X1-100367
Customer Spec		Customer Part #	V732211

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Part Detail: FL 0.6250" x 5.0000" 1018 12-R Cold Drawn
Process: Cold Drawn

C	Mn	P	S	Si	Cu	Cr	Ni	Mo	V	Cb
0.16%	0.65%	0.010%	0.023%	0.22%	0.23%	0.11%	0.08%	0.030%	0.0020%	0.002%

Melting Mill: KENTUCKY Country of Melting: USA Grain Practice: COARSE

Reduction Ratio 7.7 :1 Country of Rolling: USA Rolling Mill: KENTUCKY

Specification Comments:

1. Material certifies to ASTM A108 - 13 (unless otherwise noted) for Standard Cold Finished Bars
2. No welding or weld repair was performed on this material.
3. Mercury, radium, or alpha source materials in any form have not been used in the production of this material

MAR 1 0 2016
RECEIVED

Chris Kelly

Chris Kelly
DIVISION METALLURGIST

26
3.93013
Magellar

INTERNATIONAL SIMEC

SIMEC INTERNATIONAL, S.A. DE C.V.

GRUPO SIMEC

Aseguramiento de la Calidad

CERTIFICADO DE CALIDAD N°
CERTIFICATE OF QUALITY N° 14-4561B

A C E R O S E S P E C I A L E S

CUSTOMER ORDER: 210049

The products supplied are in compliance with the requirements of the order.

CLIENTE / CUSTOMER	Magellan Corporation	GRADO DE ACERO / STEEL GRADE	4140H / 4142
N° DE COLADA / HEAT N°	45810914	MEDIDA / SECTION SIZE	1.1/4"
IDENTIFICACION / COLOR CODE	Blue and White	PERFIL / SHAPE	Round

ANALISIS QUIMICO %
CHEMICAL ANALYSIS % (In accordance to ASTM A751-11) (DI : Caterpillar 1E0038)

C	Mn	Si	P	S	Cr	Ni	Mo	Al	Cu	Sn	P+S	V	D.I	H2(ppm)	
.40	.92	.29	.020	.020	.91	.10	.190	.027	.25	.019	.040	.000	5.51	<3ppm	

METALOGRAFIA
METALLOGRAPHY
(In accordance to ASTM E112-12)

TAMAÑO DE GRANO / GRAIN SIZE	DECARBURIZACION / DECARBURIZATION	ESTRUCTURA / STRUCTURE	INCLUSIONES NO METALICAS / NONMETALLIC-INCLUSIONS (In accordance to ASTM E45-13)			
			A	B	C	D
6-8	0.007 "	Perlite-Ferrite	2.0T 0.0H	0.5T 0.0H	1.0T 0.0H	1.0T 0.0H

PROPIEDADES MECANICAS
MECHANICALS PROPERTIES (In accordance to ASTM A370-14)

Reduction ratio= 32.33

RESISTENCIA A LA TENSION / TENSILE STRENGTH (KSI)	LIMITE DE CEDENCIA / YIELD STRENGTH (KSI)	REDUCCION DE AREA / REDUCTION IN AREA	% ALARGAMIENTO / ELONGATION IN 2" gage	DUREZA / HARDNESS
150	Y.P. 0.2%: 138	58.8	19.15	

HARDNESS (in accordance to ASTM A370-14)
MID RADIUS: N/A HBW
SURFACE: 306.6 HBW

REMARKS:
This is steel was heat treatment (QT)in continuous line heat treat
Austenitized a 1572 °F By: 38 min Quenched in: Water spray at 84 °F
Tempered at 1178 °F By 43.867 min Cooled in air at temperature room. Stress free
Conform to ASTM A193-10 Grade B7, ASTM A434-06 Class BC, ASME SA193-00 Grade B7,
AISI 4140 & AISI 4142, ASTM A388-11

OBSERVACIONES:
OBSERVATIONS
1) Steel is free from mercury
2) No Repair Welding
3) Fine Grain Practice
4) Material according with ASTM A29-12, A255-10, A304-11 y A322-07
5) Vacuum Desgased
6) Calcium aluminium treated
7) Steel is Free From Radioactive Contamination
8) Ultrasonic inspection results:ASTM E114-10 Satisfactory
9) Electric Furnace
10) ASTM E381-01: Macro eatch ratings: S=1, R=1, C=1
11) Comply with EN 10204: 2004 inspection certificate 3.1

FECHA
DATE 14-Ene-2015 11:00

Juan Ruiz Hdez.
ASEGURAMIENTO DE CALIDAD
QUALITY ASSURANCE DEPARTAMENT

F8.2.4-01/"0"

4101 - 444-31048 41000
4100 - P44-31641C 47881

41611

2P

ESSAR STEEL

ESSAR STEEL ALGOMA INC.,105 West Street, Sault Ste. Marie,Ontario, Canada P6A 7B4

SO No.,Item & Date.: 8047540 000040 2016/12/17	Shipment No.& Date.: 1200007761 2016/12/17	TC No., Date & Time : LSA-365217 2016/12/18 - 01:40:59
Sold to Customer Name and Address .	Ship to Customer Name and Address:	Customer PO NO./Item: G-46211/4
LES ACIER TRANSBEC (1997) LTEE	LES ACIER TRANSBEC (1997) LTEE	BOL NO.: 1200007761
BOUL LE CORBUSIER #201-4054	RUE JEAN COUTU 350	Cust.Part No.:
LAVAL,Quebec,Canada	VARENNES,Quebec,Canada	Carrier : C P RAIL (CAD FUNDS) - NCYX 381285
H7L 5R2	J3X 1P7	

Customer Specification : HR STEEL SHEET HSLA SQ / SS To the Chemistry of Multi Cert CSA G40.21 50W (2013) / CSA G40.21 44W (2013) Top Semi Critical Surface Improved Shape Gauge type NOM - 0.0035 " /- 0.0035 "

Supplementary Instructions : Test Cert 1:mu@colcex.ca Test Cert 2: nathalie.legault@acierransbec.com

Insp T/R : Test Report For Info Only

ESSAR STEEL ALGOMA INC. HEREBY CERTIFIES THAT THE MATERIAL HEREIN DESCRIBED WAS MADE AND TESTED IN ACCORDANCE WITH THE RULES OF THE SPECIFICATION SHOWN. ALL RESULTS ARE RETAINED IN ACCORDANCE WITH THE COMPANY'S STANDARD RECORD KEEPING PRACTICES

Cust Use : STRUCTURAL

THIS MILL TEST REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF ESSAR STEEL ALGOMA INC. IF YOU RECEIVE THIS DOCUMENT AND ARE NOT THE INTENDED RECEIVER PLEASE CALL (705)945-4095 FOR INSTRUCTIONS ON METHOD OF DISPOSAL OF DOCUMENT. THIS TEST REPORT HAS BEEN GENERATED BY A COMPUTERIZED SYSTEM AND IS VALID WITHOUT A PHYSICAL SIGNATURE

MEETS EN 10204 3.1

ISO QUALITY AND ENVIRONMENTAL CERTIFICATES AVAILABLE AT WWW.ESSARSTEELALGOMA.COM

ALL HEATS FULLY KILLED
HEATS INDICATED WITH (*) FINE GRAINED
HEATS INDICATED WITH (+) Made in Canada for NAFTA duty preference and NAFTA marking purposes

Dimensions (T x W x L)	Batch No.	Heat No-MS	Quantity	No. of Pcs	Dimensions (T x W x L)	Batch No.	Heat No-MS	Quantity	No of Pcs
0.1800 " x 48.001 "	HBK8149	4421C4-66	43,419 LB	1	0.1800 " x 48.001 "	HBK8148	4421C4-06	43,607 LB	1
0.1800 " x 48.001 "	HBK8153	4422C4-62	43,364 LB	1	0.1800 " x 48.001 "	HBK8152	4422C4-02	43,508 LB	1

CHEMICAL PROPERTIES

Heat No. (wt%)	C	Mn	P	S	Si	Cr	Ni	Cu	Mo	Al	Nb	V	Ti
4421C4* +	0.18	0.87	0.016	0.006	0.020	0.02	0.01	0.03	0.01	0.028	0.017	0.000	0.001
4422C4* +	0.18	0.85	0.016	0.004	0.030	0.03	0.02	0.04	0.00	0.030	0.015	0.000	0.002

5 17/12/16

1/2

KASHIF REHMAN
MANAGER METALLURGICAL SERVICES

ESSAR STEEL

ESSAR STEEL ALGOMA INC.,105 West Street, Sault Ste. Marie,Ontario, Canada P6A 7B4

SO No.,Item & Date.: 8047540 000040 2016/12/17	Shipment No.& Date.: 120000776 1 2016/12/17	TC No., Date & Time : ESA-365217 2016/12/18 - 01:40.59
Sold to Customer Name and Address : LES ACIER TRANSBEC (1997) LTEE BOUL LE CORBUSIER #201-4054 LAVAL,Quebec,Canada H7L 5R2	Ship to Customer Name and Address: LES ACIER TRANSBEC (1997) LTEE RUE JEAN COUTU 350 VARENNES,Quebec,Canada J3X 1P7	Customer PO NO./Item: G-46211 / 4 BOL NO.: 120000776 1 Cust.Part No.: Carrier : C P RAIL (CAD FUNDS) - NDYX 381285

Customer Specification : HR STEEL SHEET HSLA SO / SS To the Chemistry of Multi Cert CSA G40.21 50W (2013) / CSA G40.21 44W (2013) Top Semi Critical Surface Improved Shape Gauge type NOM - 0.0035 " / + 0.0035 "

Supplementary Instructions : Test Cert 1:mtr@collex.ca Test Cert 2. nathalie.legault@acierransbec.com

Insp T/R : Test Report For Info Only

Cust Use : STRUCTURAL

ESSAR STEEL ALGOMA INC. HEREBY CERTIFIES THAT THE MATERIAL HEREIN DESCRIBED WAS MADE AND TESTED IN ACCORDANCE WITH THE RULES OF THE SPECIFICATION SHOWN. ALL RESULTS ARE RETAINED IN ACCORDANCE WITH THE COMPANY'S STANDARD RECORD KEEPING PRACTICES
THIS MILL TEST REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF ESSAR STEEL ALGOMA INC. IF YOU RECEIVE THIS DOCUMENT AND ARE NOT THE INTENDED RECEIVER, PLEASE CALL (705)945-4066 FOR INSTRUCTIONS ON METHOD OF DISPOSAL OF DOCUMENT. THIS TEST REPORT HAS BEEN GENERATED BY A COMPUTERIZED SYSTEM AND IS VALID WITHOUT A PHYSICAL SIGNATURE.
MEETS EN 10204 3.1
ISO QUALITY AND ENVIRONMENTAL CERTIFICATES AVAILABLE AT WWW.ESSARSTEELALGOMA.COM

Tensile Tests

Heat No.	Batch No.	SRCE	LAB	GAUGE	COND	METH	DIR	LOC	YIELD(KSI)	TENSILE(KSI)	EL SCALE	ELONG(%)
		MECHANICAL PROPERTIES										
4421C4		DSPC	ALG	0.1800	AR	.2	T	F	59.0	72.0	2"	30
4422C4		DSPC	ALG	0.1800	AR	.2	T	F	57.0	73.0	2"	30

2/2

KASHIF REHMAN
MANAGER METALLURGICAL SERVICES

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MX-HRS-P-0.500
DATE: DEC 09 2017

PO / BATCH NO.: 038513/5017914

MATERIAL CERT REC'D: Yes
QUANTITY RECEIVED: 16 pcs
QUANTITY INSPECTED: 16 pcs
QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.500
THICKNESS RECEIVED: 0.500
SHEET SIZE ORDERED: 4x4
SHEET SIZE RECEIVED: 4x4

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	N	
CORRECT FINISH	Y	N	
CORROSION	Y	N	
CORRECT GRAIN DIRECTION	Y	N	
CORRECT MATERIAL PER M-DRAWING	Y	N	44W
CORRECT THICKNESS	Y	N	
PHOTO REQUIRED	Y	N	
CORRECT REF # TO LINK CERT	Y	N	Heat # ~~442264~~ 711852
CORRECT MATERIAL IDENTFICATION	Y	N	
CORRECT M# ON THE MATERIAL	Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY:	SIGNED OFF BY:
DATE: DEC 09 2017 / 12/1/17	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED
B	REMOVED LENGTH AND WIDTH DIMENSIONS	17-675	26/09/2017	SAC	WM

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL:	HOT ROLLED STEEL PLATE
SPECIFICATION:	ASTM A36 OR ASTM A1011 OR 44W OR ASTM A1018
PART NUMBER:	MT-HRS-P-[T.TTT]
	WHERE T.TTT IS PLATE THICKNESS IN INCHES
EXAMPLE:	MT-HRS-P-0.750
	TOLERANCES PER MANUFACTURER SPECIFICATIONS

DART AEROSPACE Hawkesbury Ontario Canada

TITLE: HOT ROLLED STEEL PLATE

DWG NO: MT-HRS-P — REV: B

DESIGN BY	SAC 9/8/2017	XXX ± .005 FRACTIONS ± 1/8
DRAWN BY	SAC 09/27/2017	XX ± .01 ANGLES ± 5°
CHECKED	VM 09/27/2017	X ± 1 SURFACES = 125
MFG. APPR.	DP 09/27/2017	1 DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED
APPROVED	WM 10/05/2017	2 INTERPRET DIM AND TOL PER ASME Y14.5M 2009
DATE	9/27/2017	3 DIMENSIONAL LIMITS APPLY AFTER PLATING
SCALE. NTS	WEIGHT: N/A	SHEET 1 OF 1

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-HRS-P-0.375
DATE: DEC 09 2017

PO / BATCH NO.: 038513/S017915

MATERIAL CERT REC'D: Y-OS
QUANTITY RECEIVED: 32 pcs
QUANTITY INSPECTED: 32 pcs
QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.375
THICKNESS RECEIVED: 0.375
SHEET SIZE ORDERED: 4X8
SHEET SIZE RECEIVED: 4X8

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	N	
CORRECT FINISH	Y	N	
CORROSION	Y	N	
CORRECT GRAIN DIRECTION	Y	N	
CORRECT MATERIAL PER M-DRAWING	Y	N	44W
CORRECT THICKNESS	Y	N	
PHOTO REQUIRED	Y	N	
CORRECT REF # TO LINK CERT	Y	N	Heat # 7093C4-51
CORRECT MATERIAL IDENTFICATION	Y	N	
CORRECT M# ON THE MATERIAL	Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: [illegible] / 6	SIGNED OFF BY:
DATE: DEC 09 2017 / 171214	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED
B	REMOVED LENGTH AND WIDTH DIMENSIONS	17-675	26/09/2017	SAC	WM

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL:	HOT ROLLED STEEL PLATE
SPECIFICATION:	ASTM A36 OR ASTM A1011 OR 44W OR ASTM A1018
PART NUMBER:	MT-HRS-P-[T.TTT]
	WHERE T.TTT IS PLATE THICKNESS IN INCHES
EXAMPLE:	MT-HRS-P-0.750
	TOLERANCES PER MANUFACTURER SPECIFICATIONS

DART AEROSPACE Hawkesbury Ontario Canada

TITLE: HOT ROLLED STEEL PLATE

DWG NO: MT-HRS-P REV: B

DESIGN BY:	SAC 9/8/2017	XXX ± .005	FRACTIONS ± 1/8
DRAWN BY	SAC 09/27/2017	XX ± .01	ANGLES ± .5°
CHECKED	VM 09/27/2017	X ± 1	SURFACES = 125
MFG APPR	DP 09/27/2017		
APPROVED	WM 10/05/2017		
DATE	9/27/2017		

1 DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED
2 INTERPRET DIM AND TOL PER ASME Y14.5M 2009
3 DIMENSIONAL LIMITS APPLY AFTER PLATING

SCALE: NTS WEIGHT: N/A SHEET 1 OF 1

48059

ERDEMIR DEMIR VE ÇELİK FABRİKALARI T.A.Ş.
INTERNATIONAL CERTIFICATE

TEST CERTIFICATE
EN 10204 3.1B TYPE

DATE
CERTIFICATE NO
PAGE NO

CUSTOMER
ORDER NO
SIEMENS CNL
STANDARD & GRADE
PRODUCT TYPE & DERIVATIVE

WATER STEEL
7001966101
CSA G40.21 ASTM A572 300W-350W GR50 T2 (ERDEMIR 3246)
HOT ROLLED HEAVY PLATE WITH WELL EDGE

LOT NO
NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATIONS | MECHANICAL PROPERTIES | CHEMICAL COMPOSITION CAST ANALYSIS

TICKET NO	WEIGHT (MT)	HEAT NO	COIL OR PLATE NO	SAMPLE POS	TENSILE TEST YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	% EL. 50	BEND TEST	IMPACT TEST POSITION	HARDNESS	AVR TEMP C	YIELD N/MM2	C %	Mn %	P %	S %	Si %	Al %	Cu %	Ni %	Cr %	PPM
0237025252	12.520	711852	7023006223L010	8																		
		711852	711852201001	TT	385 3	551.1	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852201001	TT	385 3	551.1	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852201002	TT	381 5	561.9	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852201002	TT	381 5	561.9	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852201003	TT	388 3	551.1	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852201003	TT	388 3	551.1	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852201004	TT	381 5	561.9	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852201004	TT	381 5	561.9	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
0237025253	12.440		7023006224L010	8																		
		711852	711852202001	TT	358 3	551.1	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852202001	TT	388 3	551.1	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852202002	TT	381 5	561.9	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852202002	TT	381 5	561.9	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852202003	TT	358 3	551.1	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852202003	TT	388 3	551.1	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852202004	TT	381 5	561.9	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852202004	TT	381 5	561.9	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
0237025254	12.450		7023006225L010	8																		
		711852	711852203001	TT	388 3	551.1	36						0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47

WE(THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BAS OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40 21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246)
WITH SATISFACTORY RESULTS

ERDEMİR DEMİR VE ÇELİK FABRİKALARI T.A.Ş. MANAGER

ERDEMİR DEMİR VE ÇELİK FABRİKALARI T.A.Ş. QUALITY MANAGER

NOTE T:Top, M:Middle, E:End, T:Transverse, L:Longitudinal, P.S:Piece of Slice, P.P:Piece of Plate

MERSIS Number(Istanbul Head Office): 0352-0006-4260-0020, Trade Registry Number(Istanbul Department): 90659, Trade Registry Number(Ereğli Department): 15741272
Head Office Istanbul: Barbaros Mah. Ardıç Sok. No: 6 34746 Ataşehir İSTANBUL - TURKEY
www.erdemir.com.tr

ERDEMİR

[illegible]

[illegible]

[illegible]

ERDEMIR [illegible] CERTIFICATE

[illegible] CERTIFICATE
EN 10204 [illegible] TYPE 3.1

DATE [illegible]
CERTIFICATE NO [illegible]
PAGE NO [illegible]

CUSTOMER [illegible] STEEL
ORDER NO [illegible]
DIMENSIONS [illegible]
STANDARD & GRADE CSA G40.21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246)
PRODUCT TYPE & DEFINITION [illegible] HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO [illegible] NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATIONS

MECHANICAL PROPERTIES

CHEMICAL COMPOSITION (CAST ANALYSIS)

TICKET NO	WEIGHT MT	HEAT NO	COIL OR PLATE NO	NO OF P.S/P.P	SAM POS	YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	% EL 50	BEND TEST	HARDNESS	IMPACT TEST 1	2	3	AVR	TEM °C	HIGH TEMP YIELD N/MM2	C %	MN %	P %	S %	SI %	AL %	CU %	[illegible] %	[illegible] %	ppm
0237025257	12.440	711852	71185220500220		TT	381.5	561.9	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220500310		TT	388.3	551.1	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220500320		TT	388.3	551.1	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220500410		TT	381.5	561.9	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220500420		TT	381.5	561.9	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
			7023006228L010	8													0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220600110		TT	388.3	551.1	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220600120		TT	385.3	551.1	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220600210		TT	381.5	561.9	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220600220		TT	381.5	561.9	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220600310		TT	388.3	551.1	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220600320		TT	388.3	551.1	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220600410		TT	381.5	561.9	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
0237025261	12.480	711852	71185220600420		TT	381.5	561.9	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
			7023006232L010	6													0.175	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220700110		TT	388.3	551.1	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220700120		TT	385.3	551.1	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220700210		TT	381.5	561.9	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	71185220700220		TT	381.5	561.9	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711552	71185220700310		TT	388.3	551.1	36									0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47

WE (THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246) WITH SATISFACTORY RESULTS

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.

KAMBER [illegible]
COLD [illegible]
QUALITY METALLURGY [illegible] MANAGER

NOTE T:Top, M:Middle E:End, T:Transverse, L:Longitudinal, P.S:Piece of Slice P.P:Piece of Plate
MERSIS Number(Istanbul Head Office) 0352-0006-4260-0020, Trade Registry Number(Istanbul Department) 90659 Trade Registry Number(Ereğli Department) 15747272
Head Office Istanbul: Barbaros Mah Ardıç Sok No: 5 34746 Ataşehir ISTANBUL - TURKEY

ERDEMİR

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TEST CERTIFICATE

DATE

ORDER NO

STANDARD & GRADE

PRODUCT TYPE & DESCRIPTION: HOT ROLLED HEAVY PLATE WITH MILL EDGE

PAGE 1

LOT NO 1 NO MATERIAL COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATIONS / MECHANICAL PROPERTIES / CHEMICAL COMPOSITION / CAST ANALYSIS %

CAST NO	WEIGHT (MT)	HEAT NO	COIL / PLATE NO	P.S. / P.P.	SAMPLE POS	TENSILE TEST YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	ELONG. % EL 50	BEND. TEST	HARDNESS VAL	IMPACT TEST POSITION 1	2	3	AVR. TEMP °C	YIELD N/MM2	C %	MN %	P %	S %	SI %	AL %	CU %	NI %	N %	CEQ
		711852	711852207003201	TT		388.3	551.1	36								0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852207004101	TT		381.5	551.9	36								0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852207004201	TT		381.5	561.9	36								0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
0237025262	10.430		702306233L010		8																				
		711852	711852208001101	TT		388.3	551.1	35								0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852208001201	TT		388.3	551.1	35								0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852208002101	TT		381.5	561.9	35								0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852208002201	TT		381.5	561.9	36								0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852208003101	TT		388.3	551.1	36								0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852208003201	TT		388.3	551.1	36								0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852208004101	TT		381.5	561.9	36								0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
		711852	711852208004201	TT		381.5	561.9	36								0.176	1.188	0.016	0.007	0.206	0.029	0.032	0.041	0.072	47
0237025263	10.400		702306234L010		8																				
		711855	711855201001101	TT		385.4	560.9	35								0.199	1.251	0.019	0.006	0.225	0.028	0.024	0.048	0.073	45
		711855	711855201001201	TT		385.4	560.9	36								0.199	1.251	0.019	0.006	0.225	0.028	0.024	0.048	0.073	45
		711855	711855201002101	TT		414.8	555.1	34								0.199	1.251	0.019	0.006	0.225	0.028	0.024	0.048	0.073	45
		711855	711855201002201	TT		414.8	555.1	34								0.199	1.251	0.019	0.006	0.225	0.028	0.024	0.048	0.073	45
		711855	711855201003101	TT		385.4	560.9	36								0.199	1.251	0.019	0.006	0.225	0.028	0.024	0.048	0.073	45
		711855	711855201003201	TT		385.4	560.9	36								0.199	1.251	0.019	0.006	0.225	0.028	0.024	0.048	0.073	45
		711855	711855201004101	TT		414.8	555.1	34								0.199	1.251	0.019	0.006	0.225	0.028	0.024	0.048	0.073	45

WE(THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40 21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246) WITH SATISFACTORY RESULTS

ERDEMİR DEMİR VE ÇELİK FABRİKALARI T.A.Ş. İSTANBUL LABORATUVARI

KAMBER KALİTE ÜRÜN / COLD PRODUCT QUALITY CONTROL DEPARTMENT

NOTE T:Top, M:Middle, B:Bottom, E:End, T:Transverse, L:Longitudinal, P.S:Piece of Slice, P.P:Piece of Plate

TEST CERTIFICATE

EN [illegible] TYPE

CUSTOMER	[illegible] STEEL
ORDER NO	[illegible]
DIMENSION	[illegible]
STANDARD & GRADE	CSA G40.21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246)
PRODUCT TYPE & DEFINITION	[illegible] HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO: [illegible] NO MERCURY COMPOUNDS NO WELD REPAIR

FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATION / MECHANICAL PROPERTIES / CHEMICAL COMPOSITION ON CAST ANALYSIS

TICKET NO	WEIGHT (MT)	HEAT NO	COIL OF PLATE NO	P.S P.P	SAM POS	YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	% EL 5D	BEND TEST	HARDNESS	IMPACT TEST	HIGH TEMP YIELD N/MM2	C %	MN %	P %	S %	SI %	AL %	CU %	NI %	[illegible] %	N PPM
0237025254	12.380	711855	711855520100420		TT	414.8	555.1	34					0.199	1.251	0.019	0.008	0.225	0.022	0.024	0.048	0.073	45
			7023006235L010	8																		
		711855	711855520200110		TT	385.4	560.9	36					0.199	1.251	0.019	0.008	0.225	0.026	0.024	0.048	0.073	
		711855	711855520200120		TT	385.4	560.9	36					0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855520200210		TT	414.8	555.1	34					0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.045	0.073	45
		711855	711855520200220		TT	414.8	555.1	34					0.199	1.251	0.019	0.008	0.225	0.025	0.024	0.048	0.073	45
		711855	711855520200310		TT	385.4	560.9	36					0.195	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855520200320		TT	385.4	560.9	36					0.199	1.251	0.019	0.008	0.225	0.025	0.024	0.048	0.073	45
		711855	711855520200410		TT	414.8	555.1	34					0.199	1.251	0.015	0.005	0.225	0.026	0.024	0.048	0.073	45
		711855	711855520200420		TT	414.8	555.1	34					0.199	1.251	0.019	0.008	0.225	0.026	0.024	0.048	0.073	43
0237025265	12.440		7023006236L010	8									0.199	1.251	0.019	0.008	0.225	0.022	0.024	0.048	0.073	45
		711855	711855520300110		TT	385.4	560.9	36					0.199	1.251	0.019	0.002	0.225	0.028	0.024	0.048	0.073	
		711855	711855520300120		TT	385.4	560.9	36					0.199	1.251	0.019	0.005	0.225	0.028	0.024	0.048	0.073	45
		711855	711855520300210		TT	414.8	555.1	34					0.199	1.251	0.019	0.008	0.225	0.025	0.024	0.048	0.073	45
		711855	711855520300220		TT	414.8	555.1	34					0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.045	0.073	45
		711855	711855520300310		TT	385.4	560.9	36					0.199	1.251	0.019	0.008	0.225	0.025	0.024	0.048	0.073	45
		711855	711855520300320		TT	385.4	560.9	36					0.195	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855520300410		TT	414.8	555.1	34					0.195	1.251	0.019	0.008	0.225	0.028	0.024	0.045	0.073	45
		711855	711855520300420		TT	414.8	555.1	34					0.199	1.251	0.019	0.008	0.225	0.022	0.024	0.048	0.073	45
0237025269	12.450		7023006240L010	8									0.199	1.251	0.019	0.008	0.225	0.026	0.024	0.048	0.073	45

WE(THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246) WITH SATISFACTORY RESULTS

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.

KAMBER AYDOĞAN
COIL PRODUCT
QUALITY [illegible] MANAGER

NOTE: T:Top, M:Middle, E:End, T:Transverse, L:Longitudinal, P.S:Piece of Slice, P.P:Piece of Plate

MERSIS Number(Istanbul Head Office): 0352-0066-4260-0020; Trade Registry Number(Istanbul Department): 90659 Trade Registry Number(Ereğli Department): 1574/272

Head Office: Istanbul Barbaros Mah. Ardıç Sok. No. 6 34746 Ataşehir İSTANBUL - TURKEY

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ERDEMIR DEMIR & ELEK FABRIKALARI T.A.Ş.
DUTSTANDING CAST TYPE

THE CERTIFICATE OF QUALITY
EN 10204 3.1B TYPE

CUSTOMER
ORDER NO
DIMENSIONS
STANDARD & GRADE
PRODUCT TYPE & DESCRIPTION

DATE
CERT. CERTIFICATE NO
PAGE NO

[illegible] 240 NCH
[illegible] GR50 T2 (ERDEMIR 3246)
HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO: NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATIONS

TICKET	NO WEIGHT MT	HEAT NO	COIL OR PLATE NO	P.S. OR P.P.	SAM POS	TENSILE TEST YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	% EL 50	BEND TEST	Ag % OR BH VAL	OR VAL	OR HARDNESS VAL	IMPACT TEST POSITION 1	2	3	AVR TEMP °C	HIGH TEMP °C YIELD N/MM2	C %	MN %	P %	S %	S %	AL %	CU %	N %	V %	FPM
		711855	711855204001		TT	385.4	560.9	36										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855204001		TT	385.4	560.9	36										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855204002		TT	414.8	555.1	34										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855204002		TT	414.8	555.1	34										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855204003		TT	385.4	560.9	36										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855204003		TT	385.4	560.9	36										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855204004		TT	414.8	555.1	34										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855204004		TT	414.8	555.1	34										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
0237025270	12 430		702300624L010	8																							
		711855	711855205001		TT	385.4	560.9	36										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855205001		TT	385.4	560.9	36										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855205002		TT	414.8	555.1	34										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855205002		TT	414.8	555.1	34										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855205003		TT	385.4	560.9	36										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855205003		TT	385.4	560.9	36										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855205004		TT	414.8	555.1	34										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
0237025274	12 440		702300624L010	8	TT	414.8	555.1	34										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855206001		TT	385.4	560.9	36										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855206001		TT	385.4	560.9	36										0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45

MECHANICAL PROPERTIES

CHEMICAL COMPOSITION, CAST ANALYSIS

WE (THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40 21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246) WITH SATISFACTORY RESULTS

ERDEMIR DEMIR VE ÇELİK FABRİKALARI T.A.Ş. METALURJİ LABORATUVARI

KALİTE KONTROL MÜDÜRÜ
COLD PRODUCT
QUALITY CONTROL MANAGER

NOTE: T Top, B Bottom, E End, T Transverse, L Longitudinal, P S Piece of Slice, P.P Piece of Plate

[illegible]

[illegible]

CUSTOMER: [illegible] STEEL
ORDER NO: [illegible]
DIMENSIONS: [illegible]
STANDARD & GRADE: [illegible] ASTM A572 [illegible] CSA G40 21 GRADE 50 [illegible] ERDEMIR 3245
PRODUCT TYPE & DEFINITION: [illegible] HOT ROLLED HEAVY PLATE WITH V [illegible] EDGE

DATE: [illegible]
DEPT. PLATE NO: [illegible]
PAGE NO: 1

LOT NO 1 NO MERCURY COMPOUNDS NO WELD REPAIR
KILLED STEEL AND FINE GRAIN PRACTICE

PRODUCT INFORMATIONS / MECHANICAL PROPERTIES / CHEMICAL COMPOSITION ON CAST ANALYSIS %

PLATE NO WEIGHT MT	HEAT NO	COIL NO OR PLATE NO	P.S. P.P.	SAMPLE POSITION	YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	ELONGATION % 50	BEND TEST	ASTM GRAIN SIZE	HARDNESS	IMPACT TEST POSITION	IMPACT VALUE AVR TEMP °C	HIGH TEMP °C YIELD N/MM2	C %	MN %	P %	S %	SI %	AL %	CU %	NI %	V %	N PPM
		711855 |711855206000210|	|TT		414.5	555.1	34							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855 |711855206000220|	|TT		414.8	555.1	34							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855 |711855206000310|	|TT		385.4	560.9	36							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855 |711855206000320|	|TT		385.4	560.9	36							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855 |711855206000410|	|TT		414.5	555.1	34							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
0237025275 12.350		711855206000420	|TT		414.8	555.1	34							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		7023006246L010|	8|																				
		711855 |711855207000110|	|TT		385.4	560.9	36							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855 |711855207000120|	|TT		385.4	560.9	36							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855 |711855207000210|	|TT		414.8	555.1	34							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855 |711855207000220|	|TT		414.2	555.1	34							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855 |711855207000310|	|TT		385.4	560.9	36							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855 |711855207000320|	|TT		385.4	560.9	36							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855 |711855207000410|	|TT		414.8	555.1	34							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855 |711855207000420|	|TT		414.8	555.1	34							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
0237025278 12.350		7023006249L010|	8|																				
		711855 |711855208000110	|TT		385.4	560.9	36							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855 |711855208000120|	|TT		385.4	560.9	36							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855 |711855208000210|	|TT		414.8	555.1	34							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855 |711855208000220|	|TT		414.8	555.1	34							0.199	1.251	0.019	0.008	0.225	0.028	0.024	0.048	0.073	45

WE(THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40 21/ASTM A572 50DW-35CW/ GR50 T2 (ERDEMIR 3245) WITH SATISFACTORY RESULTS

ERDEMİR DEMİR VE ÇELİK FABRİKALARI T.A.Ş. KONTROL LABORATUVARI

KAMBER AYDIN
COLLIER PRODUCT
QUALITY MANAGER

NOTE: T:Top, M:Middle, E:End, T:Transverse, L:Longitudinal, P.S:Piece of Slice, P.P:Piece of Plate

CUSTOMER

ORDER NO

DIMENSIONS (mm)

STANDARD & GRADE

PRODUCT TYPE & DEFINITION: CSA G40.21/ASTM A572 ... GR50 T2 (ERDEMIR 3245) ... HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO: NO MERCURY COMPOUNDS NO WELD REPAIR

FULLY KILLED AND FINE GRAIN PRACTICE

P R O D U C T   I N F O R M A T I O N

M E C H A N I C A L   P R O P E R T I E S

C H E M I C A L   C O M P O S I T I O N   (C A S T   A N A L Y S I S)

TICKET NO	WEIGHT (MT)	HEAT NO	COIL OR PLATE NO	NO. OF P.P.	SAM POS	YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	% EL 50	BEND TEST	HARDNESS	IMPACT TEST	C %	Mn %	P %	S %	Si %	Al %	Cu %	N %	V %	N PPM
		711855	711855208000310		TT	385.4	560.9	36				0.199	1.251	0.013	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855208000320		TT	385.4	560.9	36				0.199	1.251	0.013	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855208000410		TT	414.8	555.1	34				0.199	1.251	0.013	0.008	0.225	0.028	0.024	0.048	0.073	45
		711855	711855208000420		TT	414.8	555.1	34				0.199	1.251	0.013	0.008	0.225	0.028	0.024	0.048	0.073	45
0237025279	9.300		7023006250L010	6																	
		721750	721750201000110		TT	420.7	570.7	34				0.179	1.221	0.017	0.007	0.160	0.029	0.016	0.034	0.071	45
		721750	721750201000120		TT	420.7	570.7	34				0.175	1.221	0.017	0.007	0.160	0.029	0.016	0.034	0.071	45
		721750	721750201000210		TT	413.8	560.9	36				0.179	1.221	0.017	0.007	0.160	0.029	0.016	0.034	0.071	45
		721750	721750201000220		TT	413.8	560.9	36				0.175	1.221	0.017	0.007	0.160	0.029	0.016	0.034	0.071	45
		721750	721750201000310		TT	420.7	570.7	34				0.179	1.221	0.017	0.007	0.160	0.029	0.016	0.034	0.071	45
		721750	721750201000320		TT	420.7	570.7	34				0.179	1.221	0.017	0.007	0.160	0.029	0.016	0.034	0.071	45
0237025291	12.360		7023005252L010	8																	
		731569	731569203000110		TT	395.2	568.8	38				0.169	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569203000120		TT	395.2	568.8	38				0.169	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569203000210		TT	415.8	569.5	36				0.169	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569203000220		TT	415.8	569.6	36				0.169	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569203000310		TT	395.2	568.8	38				0.169	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569203000320		TT	395.2	568.8	38				0.169	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569203000410		TT	415.8	569.6	36				0.169	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569203000420		TT	415.8	569.6	36				0.169	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45

WE (THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3245) WITH SATISFACTORY RESULTS

KAMBER AYGÖREN

QUALITY METALLURGY MANAGER

NOTE: T:Top M:Middle, E:End T:Transverse, L:Longitudinal, P.S:Piece of Slice, P.P:Piece of Plate

VERSIS Number(İstanbul Head Office) 0352-0006-4263-0020, Trade Registry Number(İstanbul Department): 90659, Trade Registry Number(Ereğli Department) 1574/272

Head Office: İstanbul Barbaros Mah. Ardıç Sok. No. 6 34746 Ataşehir İSTANBUL - TURKEY

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CUSTOMER
ORDER NO
MATERIAL NO
STANDARD & GRADE
PRODUCT TYPE & DIMENSION

WITH STEEL
ERDEMIR 3246
HOT ROLLED HEAVY PLATE WITH MILL EDGE

DATE
PAGE NO

LOT NO : NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATION

TAG-ET NO	NOMINAL WEIGHT (MT)	HEAT NO	COIL NO OR PLATE NO	P.S. OR P.P.	SAMPLE POS	TENSILE TEST YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	% EL 50	BEND TEST	HARDNESS	IMPACT TEST POSITION 1	2	3	AVR TEMP °C	HIGH TEMP °C	YIELD N/MM2	C %	MN %	P %	S %	SI %	AL %	CU %	N %	% CEV
0237025328	12 425		7023006289L010	8																					
		731566	731566201091		TT	398 1	581 5	34									0 198	1 220	0 013	0 005	0 157	0 030	0 051	0 038	0 074	45
		731566	731566201001		TT	398 1	581.5	34									0.198	1 220	0 013	0.005	0 157	0 030	0 051	0 038	0 074	45
		731566	731566201021		TT	387 4	569.8	36									0 198	1 220	0 013	0 005	0 157	0 030	0 051	0 038	0 074	45
		731566	731566201002		TT	387 4	569 8	36									0 198	1 220	0.013	0 005	0 157	0 030	0 051	0 038	0 074	45
		731566	731566201003		TT	398 1	581 5	34									0 198	1 220	0 013	0 005	0 157	0 030	0 051	0 038	0.074	45
		731566	731566201004		TT	387 4	569 8	36									0 198	1 220	0 013	0 005	0 157	0.030	0 051	0 038	0 074	45
		731566	731566201004		TT	387 4	569 8	36									0 198	1 220	0 013	0 005	0 157	0 030	0 051	0 038	0 074	45
0237025329	12 425		7023006290L010	8																					
		731566	731566202011		TT	398 1	581 5	34									0 198	1 220	0 013	0 005	0 157	0 030	0 051	0 038	0 074	45
		731566	731566202001		TT	398 1	581.5	34									0 198	1 220	0 013	0 005	0 157	0 030	0 051	0 038	0 074	45
		731566	731566202021		TT	387.4	569.8	36									0 198	1 220	0 013	0 005	0 157	0 030	0 051	0 038	0 074	45
		731566	731566202002		TT	387 4	569.8	36									0 198	1 220	0 013	0 005	0 157	0 030	0 051	0.038	0.074	45
		731566	731566202003		TT	398.1	581.5	34									0 198	1 220	0 013	0 005	0 157	0.030	0 051	0.038	0.074	45
		731566	731566202003		TT	398 1	581 5	34									0 198	1 220	0 013	0 005	0 157	0.030	0 051	0 038	0.074	45
		731566	731566202004		TT	387 4	569.8	36									0 198	1 220	0 013	0 005	0 157	0 030	0 051	0 038	0.074	45
		731566	731566202004		TT	387 4	569 8	36									0 198	1 220	0 013	0 005	0 157	0 030	0 051	0.038	0.074	45
0237025330	12 435		7023006291L010	8																					
		731566	731566203011		TT	398 1	581 5	34									0 198	1 220	0 013	0 005	0 157	0 030	0 051	0 038	0 074	45

WE(THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40 21/ASTM A572 303W-350W GR50 T2 (ERDEMIR 3246) WITH SATISFACTORY RESULTS

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş. METALURJİ LABORATUVARI

EREĞLİ DEMİR VE ÇELİK FABRİKALARI METALURJİ LABORATUVARI
CEMİL ATGÖREN
QUALITY ASSURANCE MANAGER

NOTE T Top, M:Middle, E End T Transverse, L Longitudinal, P S:Piece of Slice, P.P:Piece of Plate
MERSIS Number(Istanbul Head Office) 0352-0006-4260-0020; Trade Registry Number(Istanbul Department) 90659; Trade Registry Number(Ereğli Department) 15747272
Head Office: Istanbul: Barbaros Mah Arıcı Sok No. 6 34746 Ataşehir ISTANBUL - TURKEY

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EREGLI DEMIR VE CELIK FAB. [illegible]
[illegible]

[illegible]
EN 10204 [illegible] TYPE [illegible]

DATE :
CERT [illegible] NO :
PAGE NO :

CUSTOMER : [illegible] STEEL
ORDER NO : [illegible]
DIMENSIONS (mm) : [illegible] 240 [illegible]
STANDARD & GRADE : CSA G40 21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246)
PRODUCT TYPE & DEFINITION : [illegible] HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO :
NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATIONS				MECHANICAL PROPERTIES																CHEMICAL COMPOSITION ON CAST ANALYSIS									
TICKET NO	WEIGHT (MT)	HEAT NO	COIL OF PLATE NO	P/S OF P/P	TENSILE TEST SAM POS	YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	% EL 50	BEND TEST	AS [illegible] VAL	[illegible] VAL	[illegible] VAL	HARDNESS	IMPACT TEST POSITION 1	2	3	AVR	TEM C	HIGH TEMP YIELD N/MM2	C %	MN %	P %	S %	SI %	AL %	CU %	NI %	[illegible] %	ppm
		731566	73156620300120		TT	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	73156620300210		TT	387.4	569.8	36												0.195	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	73156620300220		TT	387.4	569.8	36												0.192	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	73156620300310		TT	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	73156620300320		TT	398.1	581.5	34												0.195	1.220	0.013	0.005	0.157	0.030	0.051	0.035	0.074	45
		731566	73156620300410		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.035	0.074	45
		731566	73156620300420		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
0237025331	12.400		7023006282L010	S																									
		731566	73156620400110		—	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	73156620400120		TT	398.1	581.5	34												0.195	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	73156620400210		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.035	0.074	45
		731566	73156620400220		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.035	0.074	45
		731566	73156620400310		TT	398.1	581.5	34												0.195	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	73156620400320		TT	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	73156620400410		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	73156620400420		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
0237025332	12.445		7023006293L010	E																									
		731566	73156620500110		TT	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.035	0.074	45
		731566	73156620500120		TT	398.1	581.5	34												0.192	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	73156620500210		TT	387.4	569.8	36												0.195	1.220	0.013	0.005	0.157	0.030	0.051	0.035	0.074	45

WE(THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40 21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246) WITH SATISFACTORY RESULTS

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.

QUALITY

NOTE. T:Top, M:Middle, E:End T:Transverse, L:Longitudinal, P.S:Piece of Slice, P.P:Piece of Plate
MERSIS Number(Istanbul Head Office): 0352-0006-4260-0020 Trade Registry Number(Istanbul Department): 90659 Trade Registry Number(Eregli Department): 1574/272
Head Office: Istanbul. Barbaros Mah. Ardıç Sok. No: 6 34746 Ataşehir ISTANBUL - TURKEY

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EREĞLİ DEMİR [illegible]

[illegible]

TEST CERTIFICATE
EN 10204 2004 TYPE 3.1

DATE [illegible]
CERTIFICATE NO [illegible]
PAGE NO [illegible]

CUSTOMER [illegible] STEEL
ORDER NO [illegible]
DIMENSIONS MM [illegible] 2438 [illegible]
STANDARD & GRADE CSA G40.21/ASTM A572 300W-350W GR50 T2 (ERDEMIR 3246)
PRODUCT TYPE & DELIVERY CONDITION [illegible] HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO [illegible] NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATIONS / MECHANICAL PROPERTIES / CHEMICAL COMPOSITION ON CAST ANALYSIS

TICKET NO	WEIGHT (T)	HEAT NO	COIL or PLATE NO	P.S or P.P	SAM POS	TENSILE TEST YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	% EL 50	BEND TEST	Ag or BH VAL	r VAL	Y/T or n VAL	HARDNESS	IMPACT TEST POSITION 1	2	3	AVR	TEM °C	HIGH TEMP YIELD N/MM2	C %	MN %	P %	S %	SI %	AL %	CU %	NI %	%	% PPM
		731566	731566205003220		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.035	0.074	45
		731566	731566205003[illegible]		TT	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	731566205003320		TT	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	731566205004100		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	731566205004200		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.035	0.074	45
0237025333	12.475		7023006295L010	5																									
		731566	731566205001'0		TT	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	731566205001200		TT	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	731566206002101		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	731566206002201		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	731566205003'0		TT	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	731566205003200		TT	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	731566205004'0		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	731566205004200		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
0237025334	12.380		7023006297L010	5																									
		731566	731566207001'0		TT	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	731566207001201		TT	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	731566207002101		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.035	0.074	45
		731566	731566207002201		TT	387.4	569.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	731566207003'0		TT	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45

WE(THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21/ASTM A572 300W-350W GR50 T2 (ERDEMIR 3246) WITH SATISFACTORY RESULTS

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.

QUALITY METALLURGY MANAGER

ERDEMİR

NOTE T:Top, M:Middle, E:End T:Transverse, L:Longitudinal, P.S:Piece of Slice, P.P:Piece of Plate
MERSIS Number(Istanbul Head Office): 0352-0006-4260-0020, Trade Registry Number(Istanbul Department): 90659, Trade Registry Number(Ereğli Department):1574/172
Head Office: Istanbul Barbaros Mah. Ardıç Sok. No: 6 34746 Ataşehir ISTANBUL - TURKEY

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EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.
[illegible]

TEST CERTIFICATE
EN 10204 3.1 TYPE

DATE : [illegible]
CERTIFICATE NO : [illegible]
PAGE NO : [illegible]

CUSTOMER : [illegible] STEEL
ORDER NO : [illegible]
DIMENSIONS (mm) : [illegible]
STANDARD & GRADE : CSA G40.21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246)
PRODUCT TYPE & DEFINITION : [illegible] HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO : [illegible] NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATIONS					MECHANICAL PROPERTIES													CHEMICAL COMPOSITION ON CAST ANALYSIS									
TICKET NO	WEIGHT (MT)	HEAT NO	COIL OR PLATE NO	P.S OF P.P	SAM POS	YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	% EL 5D	BEND TEST	Ag OR Gn VAL	VAL	VAL	HARDNESS	IMPACT TEST POSITION 1	2	3	AVR	TEM °C	H.Gn TEMP °C YIELD N/MM2	C %	MN %	P %	S %	SI %	AL %	CU %	NI %	V %	N PPM
		731566	73156620700320		TT	398.1	581.5	34												0.196	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	73156620700410		TT	387.4	569.9	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.035	0.074	45
		731566	73156620700420		TT	387.4	559.9	36												0.195	1.220	0.013	0.005	0.157	0.030	0.051	0.035	0.074	45
0237025335	12.400		7023006259L013	8																									
		731566	73156620800110		TT	399.[illegible]	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.036	0.074	45
		731566	73156620800120		TT	399.[illegible]	581.5	34												0.155	1.220	0.013	0.005	0.157	0.030	0.051	0.036	0.074	45
		731566	73156620800210		TT	397.4	569.8	35												0.158	1.220	0.013	0.005	0.157	0.030	0.051	0.036	0.074	45
		731566	73156620800220		TT	397.4	565.6	36												0.196	1.220	0.013	0.005	0.157	0.030	0.051	0.035	0.074	45
		731566	73156620800310		TT	398.[illegible]	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	73156620800320		TT	398.1	581.5	34												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	73156620800410		TT	387.4	569.9	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
		731566	73156620800420		TT	387.4	559.8	36												0.198	1.220	0.013	0.005	0.157	0.030	0.051	0.038	0.074	45
0237025336	12.350		7023006330L013	8																									
		731569	73156920100110		TT	395.2	568.8	38												0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920100120		TT	395.2	568.5	38												0.169	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920100210		TT	415.8	569.9	35												0.189	1.201	0.017	0.005	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920100220		TT	415.8	569.8	36												0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920100310		TT	395.2	568.8	38												0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920100320		TT	395.2	568.8	38												0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920100410		TT	415.6	569.9	36												0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45

WE (THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246) WITH SATISFACTORY RESULTS.

NOTE. T:Top, M:Middle, E:End, T:Transverse, L:Longitudinal, P.S:Piece of Slice, P.P:Piece of Plate
MERSIS Number(Istanbul Head Office): 0352-0006-4260-0020, Trade Registry Number(Istanbul Department) 90659, Trade Registry Number(Ereğli Department) 1574/272
Head Office Istanbul Barbaros Mah. Ardıç Sok. No 6 34746 Ataşehir ISTANBUL - TURKEY

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EREĞLİ DEMİR [illegible]

[illegible]

DATE [illegible]
CERTIFICATE NO [illegible]
PAGE NO [illegible]

CUSTOMER [illegible] STEEL
ORDER NO [illegible]
DIMENSIONS (MM) [illegible]
STANDARD & GRADE CSA [illegible] /ASTM A572 300W 350W [illegible] ERDEMIR 3245
PRODUCT TYPE & CONDITION [illegible] HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO [illegible] NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATION — MECHANICAL PROPERTIES — CHEMICAL COMPOSITION ON CAST ANALYSIS

TICKET NO	WEIGHT MT.	HEAT NO	CC or PLATE NO	P.S. or P.P.	SAM POS	YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	% EL 50	BEND TEST	HARDNESS	IMPACT TEST POSITION	HIGH TEMP YIELD N/MM2	C %	MN %	P %	S %	SI %	AL %	CU %	%	%	N PPM
0237025337	12.375	731569	73156920100420		TT	415.8	569.8	36					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
			7023006301L010	8																		
		731569	73156920200110		TT	395.2	568.8	38					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920200120		TT	395.2	568.8	38					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920200210		TT	415.8	569.8	36					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73155920200220		TT	415.8	569.8	36					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920200310		TT	395.2	568.8	38					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920200320		TT	395.2	568.8	38					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73155920200410		TT	415.8	569.8	36					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
0237025338	12.380	731569	73156920200420		TT	415.8	569.8	36					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
			7023006302L010	8																		
		731569	73156920400110		TT	395.2	568.8	38					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920400120		TT	395.2	568.8	38					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73155920400210		TT	415.8	569.8	36					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920400220		TT	415.8	569.8	36					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920400310		TT	395.2	568.8	38					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920400320		TT	395.2	568.8	38					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	73156920400410		TT	415.8	569.8	36					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
0237025339	12.440	731569	73156920400420		TT	415.8	569.8	36					0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
			7023006303L010	8																		

WE(THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3245) WITH SATISFACTORY RESULTS.

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.

NOTE: T:Top, M:Middle, E:End, T:Transverse, L:Longitudinal P.S:Piece of Slice, P.P:Piece of Plate
MERSIS Number(Istanbul Head Office): 0352-0006-4260-0020; Trade Registry Number(Istanbul Department): 90659; Trade Registry Number(Ereğli Department) 1574/272
Head Office: Istanbul: Barbaros Mah. Ardıç Sok. No. 6 34746 Ataşehir ISTANBUL - TURKEY

ERDEMİR

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ERDEMİR VE ÇELİK FABRİKALARI T.A.Ş.
OUTSTANDING CAPITAL [illegible]

TEST CERTIFICATE

EN 10204 2004 TYPE 3.1

DATE [illegible]
CERTIFICATE NO. [illegible]
PAGE NO 14

CUSTOMER: WIRTH STEEL
ORDER NO: [illegible]
DIMENSIONS mm: 2 700 X 2438 X 8096 (0.850 X 96 X 240 INCH)
STANDARD & GRADE: CSA G40.21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246)
PRODUCT TYPE & DEFINITION: LKR HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO 1 NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATIONS					MECHANICAL PROPERTIES												CHEMICAL COMPOSITION, CAST ANALYSIS %									
TICKET NO	WEIGHT (MT)	HEAT NO	COIL or PLATE NO	P.S or P.P	SAMPLE POS	TENSILE TEST YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	% EL 50	BEND TEST	AS of BH VAL	I VAL	V/T or n VAL	HARDNESS	IMPACT TEST POSITION 1	2	3	AVR TEMP °C	HIGH TEMP °C YIELD N/MM2	C %	MN %	P %	S %	SI %	AL %	CU %	NI %	V %	N PPM
		731569	731569205001 10		TT	395.2	568.5	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569205001 20		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569205002 10		TT	415.6	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569205002 20		TT	415.8	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569205003 10		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569205003 20		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569205004 10		TT	415.6	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
0237025342	12.400	731569	731569205004 20		TT	415.8	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
			70230063CBL010	8															0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569206001 10		TT	395.2	568.6	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569205001 20		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569206002 10		TT	415.6	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569205002 20		TT	415.8	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569206003 10		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569206003 20		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569206004 10		TT	415.6	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
0237025343	12.400	731569	731569206004 20		TT	415.8	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
			70230063CFL010	8															0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569207001 10		TT	395.2	568.6	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569207001 20		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45

WE(THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246) WITH SATISFACTORY RESULTS

ERDEMİR VE ÇELİK FABRİKALARI T.A.Ş. METALURJİ LABORATUVARI

KAMBİZ AYGÜN
COLD PRODUCT
QUALITY [illegible]

ERDEMİR

NOTE: T:Top, M:Middle, E:End, T:Transverse, L:Longitudinal, P.S:Piece of Slice, P.P:Piece of Plate

5113

ERDEMİR DEMİR VE ÇELİK FABRİKALARI T.A.Ş.
OUTSTANDING CAPITAL : 3.000.000.000 TL

TEST CERTIFICATE
EN 10204 , 2004 TYPE 3.1

DATE : 25/04/2017
CERTIFICATE NO : 75602561
PAGE NO : 1/1

CUSTOMER : WIRTH STEEL
ORDER NO : 7850095703
DIMENSIONS mm : 12.700 X 2438 X 6096 (0.500 X 96 X 240 INCH)
STANDARD & GRADE : CSA G40.21/ASTM A572 300W-350W GR50 T2 (ERDEMIR 3246)
PRODUCT TYPE & DEFINITION : LKK HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO 1 NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATIONS					MECHANICAL PROPERTIES											CHEMICAL COMPOSITION CAST ANALYSIS %										
TICKET NO	WEIGHT (MT)	HEAT NO	COIL or PLATE NO	P.S or P.P	TENSILE TEST SAMPOS	YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	% EL 50	BEND TEST	Ag or BH VAL	r VAL	YIT or n VAL	HARDNESS	IMPACT TEST, joule POSITION 1	2	3	AVR TEMP °C	HIGH TEMP °C YIELD N/MM2	C %	MN %	P %	S %	SI %	AL %	CU %	NI %	V %	N PPM
		731569	731569207002		TT	415.8	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569207002		TT	415.8	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569207003		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569207003		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569207004		TT	415.8	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
0237025344	12.360	731569	731569207004		TT	415.8	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
			70230063081010	8															0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569208001		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569208001		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569208002		TT	415.8	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569208002		TT	415.8	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569208003		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569208003		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569208004		TT	415.8	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
0237025346	12.425	731569	731569208004		TT	415.8	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
			70230063101010	8															0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569209001		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569209001		TT	395.2	568.8	38											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569209002		TT	415.8	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569209002		TT	415.8	569.8	36											0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45

ME(THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21/ASTM A572 300W-350W GR50 T2 (ERDEMIR 3246) WITH SATISFACTORY RESULTS.

ERDEMİR DEMİR VE ÇELİK FABRİKALARI T.A.Ş. METALURJİ LABORATUVARI

KAMBER AYGÜNER
COLD PRODUCT
QUALITY MANAGER

ERDEMİR

NOTE: T:Top, M:Middle, E:End, T:Transverse, L:Longitudinal, P.S:Piece of Slice, P.P:Piece of Plate
MERSIS Number(Istanbul Head Office): 0352-0006-4260-0020; Trade Registry Number(Istanbul Department): 90659; Trade Registry Number(Ereğli Department):15747272
Head Office: Istanbul: Barbaros Mah. Ardıç Sok. No: 6 34746 Ataşehir ISTANBUL - TURKEY
www.erdemir.com.tr

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.
OUTSTANDING CAPITAL 3.500.000.000 TL

TEST CERTIFICATE

EN 10204 2004 TYPE 3.1

DATE 23/04/2017
CERTIFICATE NO 70E00951
PAGE NO 15

CUSTOMER WIRTH STEEL
ORDER NO 7E00096E703
DIMENSIONS mm 19.700 X 2438 X 6096 (0.800 X 96 X 240 INCH)
STANDARD & GRADE CSA G40.21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246)
PRODUCT TYPE & DEFINITION LKK HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO 1 NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATIONS					MECHANICAL PROPERTIES														CHEMICAL COMPOSITION CAST ANALYSIS %								
TICKET NO	WEIGHT (MT)	HEAT NO	COIL or PLATE NO	P.S or P.P	TENSILE TEST SAM POS	YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	EL % 50	BEND TEST	Ag or BH VAL	r VAL	Y/T or n VAL	HARDNESS	IMPACT TEST POSITION 1	2	3	AVR TEMP °C	CVN °C	HIGH TEMP °C YIELD N/MM2	C %	MN %	P %	S %	SI %	AL %	CU %	NI %	V %	N PPM
		731569	731569209000310		TT	395.2	555.8	36												0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569209000320		TT	395.2	568.8	38												0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569209000410		TT	415.8	569.8	36												0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
		731569	731569209000420		TT	415.8	569.8	36												0.189	1.201	0.017	0.008	0.173	0.031	0.033	0.042	0.074	45
0237025718	3.095		7023006725L0101	2																									
		721750	721750201004100		TT	420.7	570.7	34												0.179	1.221	0.017	0.007	0.160	0.029	0.016	0.034	0.071	45
		721750	721750201004200		TT	420.7	570.7	34												0.179	1.227	0.017	0.007	0.150	0.029	0.016	0.034	0.071	45

WE (THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21/ASTM A572 300W-350W/ GR50 T2 (ERDEMIR 3246) WITH SATISFACTORY RESULTS

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş. İSTANBUL LABORATUVARI

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş. İSTANBUL LABORATUVARI
QUALITY CONTROL MANAGER

NOTE: T:Top, M:Middle, E:End, T:Transverse, L:Longitudinal, P.S:Piece of Slice, P.P:Piece of Plate

DART -> 164891

G-46220 PH4-38110 4112 48101 4110 48100

ESSAR STEEL

ESSAR STEEL ALGOMA INC.,105 West Street, Sault Ste. Marie,Ontario, Canada P6A 7B4

SO No.,Item & Date.: 8050589 000060 2017/03/12	Shipment No.& Date.: 1200008792 2017/03/12	TC No., Date & Time : ESA-365275 2017/03/13 - 01:40:39
Sold to Customer Name and Address : LES ACIER TRANSBEC (1997) LTEE, BOUL LE CORBUSIER #201-4054, LAVAL,Quebec,Canada, H7L 5R2	Ship to Customer Name and Address: LES ACIER TRANSBEC (1997) LTEE, RUE JEAN COUTU 350, VARENNES,Quebec,Canada, J3X 1P7	Customer PO NO./Item: G-46220(REV) / 6 BOL NO.: 1200008792 Cust.Part No.: Carrier : C P RAIL (CAD FUNDS) - CGLX 12068

Customer Specification : HR STEEL SHEET HSLA SQ / SS To the Chemistry of CSA G40.21 44W (2013) Top Semi Critical Surface Improved Shape Gauge type MIN - 0/+ 0.0100 "

Supplementary Instructions : Test Cert 1:mtr@coilex.ca Test Cert 2: nathalie.legault@aciertransbec.com

Insp T/R : Test Report For Info Only

Cust Use : RESALE IMPR SHAPE & SURF

ESSAR STEEL ALGOMA INC. HEREBY CERTIFIES THAT THE MATERIAL HEREIN DESCRIBED WAS MADE AND TESTED IN ACCORDANCE WITH THE RULES OF THE SPECIFICATION SHOWN. ALL RESULTS ARE RETAINED IN ACCORDANCE WITH THE COMPANY'S STANDARD RECORD KEEPING PRACTICES.
THIS MILL TEST REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF ESSAR STEEL ALGOMA INC. IF YOU RECEIVE THIS DOCUMENT AND ARE NOT THE INTENDED RECEIVER, PLEASE CALL (705)945-4065 FOR INSTRUCTIONS ON METHOD OF DISPOSAL OF DOCUMENT. THIS TEST REPORT HAS BEEN GENERATED BY A COMPUTERIZED SYSTEM AND IS VALID WITHOUT A PHYSICAL SIGNATURE.

MEETS EN 10204 3.1
ISO QUALITY AND ENVIRONMENTAL CERTIFICATES AVAILABLE AT WWW.ESSARSTEELALGOMA.COM

ALL HEATS FULLY KILLED.
HEATS INDICATED WITH (*) FINE GRAINED.
HEATS INDICATED WITH (+) Made in Canada for NAFTA duty preference and NAFTA marking purposes.

Dimensions (T x W x L)	Batch No.	Heat No-MS	Quantity	Pcs
0.3650 " x 48.000 "	XBM9191	7093C4-51	42,184 LB	1

CHEMICAL PROPERTIES

Heat No. (wt%)	C	Mn	P	S	Si	Cr	Ni	Cu	Mo	Al	Nb	V	Ti
7093C4* +	0.17	0.87	0.009	0.004	0.030	0.02	0.02	0.03	0.00	0.040	0.017	0.000	0.002

MECHANICAL PROPERTIES

Tensile Tests

Heat No.	Batch No.	SRCE	LAB	GAUGE	COND	METH	DIR	LOC	YIELD(KSI)	TENSILE(KSI)	EL SCALE	ELONG(%)
7093C4		DSPC	ALG	0.3650	AR	.2	T	F	56.0	76.0	2"	42

Campi

17/12/11

KASHIF REHMAN
MANAGER METALLURGICAL SERVICES

WARNING THE TEST RESULTS AND VALUES REPORTED HEREIN INDICATE ONLY THAT (1) THE PARTICULAR STEEL FOR WHICH THIS CERTIFICATE IS ISSUED MEETS THE MINIMUM SPECIFIED YIELD STRENGTH AND (2) THE ANALYSIS AND PHYSICAL PROPERTIES OF SUCH STEEL ARE IN CONFORMANCE WITH THE REQUIREMENTS OF THE SPECIFICATION INDICATED. THE RESULTS OR VALUES REPORTED HEREIN CAN NOT BE USED TO QUALIFY THE STEEL FOR ANY SPECIFICATION OTHER THAN THE ONE INDICATED AND CAN NOT BE RELIED UPON FOR ANY PURPOSE (INCLUDING DESIGN OR CALCULATIONS) AS REPRESENTING THE ACTUAL STRENGTH OF SUCH STEEL.